Sharing Policies in Multiuser Privacy Scenarios

Incorporating Context, Preferences, and Arguments in Decision Making

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Multiuser Privacy Scenario

- Information to be shared involves multiple users
Sharing Policies in Multiuser Scenarios

- Example policies: *All*, *None*, or *Common friends*
- One’s preferred policy may violate the privacy of another

A: Share with none; C: Share with all
Optimal Sharing Policy

An optimal sharing policy in a multiuser scenario is a policy most likely to be accepted by all users involved.

- What factors influence sharing policies in multiuser scenarios?
- Can we automatically infer optimal sharing policies in multiuser scenarios?

Identifying the optimal policy, when it exists, can minimize the burden on the users to resolve the conflict manually.
Factors Influencing Sharing Policies

• **Context** of the information
  – Relationship, sensitivity, sentiment
• **Preferences** of the users involved
  – Preferred policy of each user
• **Arguments** provided by users for their preferences
  – Positive or negative consequence, exceptional case

What is the relative importance of these factors in inferring the optimal sharing policy?
Study Design

- Ask participants to self report experiences
  - Biased toward non-sensitive scenarios
- Ask participants to answer direct questions
  - Dichotomy between stated and actual behavior

We ask participants to immerse in *sharing situations* – combinations of context, preferences, and arguments
An Example Sharing Scenario: Step 1

Aiko (C) took the picture above with her colleagues Ichiro and Katsu and, a French volunteer at the tsunami relief center.

Consider that Aiko wants to upload this picture to his social media account. What sharing policy should she apply for the picture?
An Example Sharing Scenario: Step 2

Next, consider the users’ preferences as follows
– Aiko: Share among ourselves
– Ichiro: Share among ourselves
– Katsu: Share with all

Now, considering the context and users’ preferences, what sharing policy should Aiko apply for the picture?
An Example Sharing Scenario: Step 3

Finally, consider the users’ preferences and arguments

- Aiko: This was one of the worst natural disasters ever happened. Share among ourselves
- Ichiro: Tsunami was a disaster and our gestures are not appropriate; people may get the wrong idea. Share among ourselves
- Katsu: The picture shows the difficult situation survivors; sharing this can encourage people to help. Share with all

Now, considering the context, and users’ preferences and arguments, what sharing policy should Aiko apply for the picture?